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ABSTRACT

A carbon fiber woven fabric is obtained by soaking a cellulose-based woven fabric in a phosphoric acid or phosphoric acid compound solution, if necessary, and then firing in a non-oxidizing atmosphere. Also, by filling a resin powder into and heating the above-mentioned carbon fiber woven fabric or a carbon fiber woven fabric obtained by firing a cellulose-based woven fabric in a non-oxidizing atmosphere without treatment in a phosphoric acid or phosphoric acid compound solution, it is possible to obtain a carbon fiber woven fabric suitable as a porous carbon sheet which also exhibits water repellency. The carbon fiber woven fabric has a thickness in the range of 0.05-0.4 mm, a volume resistivity of less than 0.2 Ω ·cm in the layer direction, and a gas permeability of 1500 cc/cm²/hr/mmAq or greater, and is useful as a gas diffusing carbon sheet for a fuel cell.

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